16H #23



1600

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TECH CENTER 1600/2900

#23 DATE: 01/09/2003

TIME: 11:43:40

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/442,489C

Input Set: A:\SN 09-442,489 amended sequence listing without

markings.txt

```
4 <110> APPLICANT: Albertsen, Hans
        Anand, Rakesh
 5
        Carlson, Mary
 6
        Groden, Joanna
 7
        Hedge, Philip John
8
        Joslyn, Geoff
 9
10
        Kinzler, Kenneth
11
        Markham, Alexander Fred
12
        Nakamura, Yusuke
13
        Thliveris, Andrew
         Vogelstein, Bert
14
        White, Raymond L.
15
17 <120> TITLE OF INVENTION: APC Antibodies
                                                           ENTERED
20 <130> FILE REFERENCE: 001107.78817
22 <140> CURRENT APPLICATION NUMBER: US 09/442,489C
23 <141> CURRENT FILING DATE: 1999-11-18
25 <150> PRIOR APPLICATION NUMBER: US 08/452,654
26 <151> PRIOR FILING DATE: 1995-05-25
28 <150> PRIOR APPLICATION NUMBER: US 08/289,548
29 <151> PRIOR FILING DATE: 1994-08-12
31 <150> PRIOR APPLICATION NUMBER: US 07/741,940
32 <151> PRIOR FILING DATE: 1991-08-08
34 <160> NUMBER OF SEQ ID NOS: 154
36 <170> SOFTWARE: FastSEQ for Windows Version 4.0
38 <210> SEQ ID NO: 1
39 <211> LENGTH: 9606
40 <212> TYPE: DNA
41 <213> ORGANISM: Homo sapiens
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                                                                           60
45 ttaaagcaag ttgaggcact gaagatggag aactcaaatc ttcgacaaga gctagaagat
                                                                          120
                                                                          180
46 aattccaatc atcttacaaa actggaaact gaggcatcta atatgaagga agtacttaaa
                                                                          240
47 caactacaag gaagtattga agatgaagct atggcttctt ctggacagat tgatttatta
                                                                          300
48 gagcgtctta aagagcttaa cttagatagc agtaatttcc ctggagtaaa actgcggtca
                                                                          360
49 aaaatgtccc tccgttctta tggaagccgg gaaggatctg tatcaagccg ttctggagag
                                                                          420
50 tgcagtcctg ttcctatggg ttcatttcca agaagagggt ttgtaaatgg aagcagagaa
                                                                          480
51 agtactggat atttagaaga acttgagaaa gagaggtcat tgcttcttgc tgatcttgac
                                                                          540
52 aaagaagaaa aggaaaaaga ctggtattac gctcaacttc agaatctcac taaaagaata
53 gatagtette etttaactga aaatttttee ttacaaacag atttgaccag aaggeaattg
                                                                          600
                                                                          660
54 gaatatgaag caaggcaaat cagagttgcg atggaagaac aactaggtac ctgccaggat
                                                                          720
55 atggaaaaac gagcacagcg aagaatagcc agaattcagc aaatcgaaaa ggacatactt
56 cgtatacgac agcttttaca gtcccaagca acagaagcag agaggtcatc tcagaacaag
                                                                          780
57 catgaaaccg gctcacatga tgctgagcgg cagaatgaag gtcaaggagt gggagaaatc
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DATE: 01/09/2003 PATENT APPLICATION: US/09/442,489C TIME: 11:43:40

Input Set : A:\SN 09-442,489 amended sequence listing without

markings.txt

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TO and white the contract and cacacacticit deacetedad georgaeady teacetaggs	960
co account and account of a threat fatty treat action quality a range of the contract of the c	1020
cl stategaggs ofttagtagg tatgtctagg tcccaagaca gcigialaic cargegacag	1080
co teterate the thecteteet categorit ttacategori algacianga cooligians	1140
co ++	1200
64 atcattcact cacagootga tgacaagaga ggcaggogtg aaatcogagt cottoatott	1260
65 ttggaacaga tacgcgctta ctgtgaaacc tgttgggagt ggcaggaagc tcatgaacca	1320
66 ggcatggacc aggacaaaaa tccaatgcca gctcctgttg aacatcagat ctgtcctgct	1380
t the alternative annual market market annual market annua	1440
Live amonttotta annattatta annattatatta annattatatta	1500
68 gggggactac aggccattgc agaditatty caagtggdac gtgdaday a system of a satgaccact acagtattac actaagacga tatgcttggaa tggctttgac aaacttgact	1560
70 tttggagatg tagccaacaa ggctacgcta tgctctatga aaggctgcat gagagcactt	1620
70 tttggagatg tagccaacaa ggctacgcta tgctctatga daggoogon y	1680
70 titiggagaty tayocaacaa ggottagaagac ttacagcagg ttattgcaag tgttttgagg 71 gtggcccaac taaaatctga aagtgaagac ttacagcagg ttattgcaagt tggaagtgtg	1740
71 gtggcccaac taaaatcega dagggaagt aaaaagacgt tgcgagaagt tggaagtgtg 72 aatttgtctt ggcgagcaga tgtaaatagt aaaaagacgt tgcgagaagt tggaagtgtattg	1800
72 aattigitet ggegageaga tytudadays aaaaaggaat caaccetcaa aagegtattg 73 aaagcattga tggaatgtgc tttagaagatt aaaaaggaat caaccetcaa aagegtattg	1860
73 aaagcattya tygaattytye tetagaayse aastys aaraa aagctyatat atytyctyta 74 agtyccttat ggaatttyte agcacattya actysagaata aagctyata	1920
74 agtgccttat ggaattigte agetadatys arrivers gagccagac aaacacttta 75 gatggtgcac ttgcattttt ggttggcact cttacttacc ggagccagac aaacacttta	1980
76 gccattattg aaagtggagg tgggatatta cggaatgtgt ccagcttgat agctacaaat	2040
76 gccattatty adaytygagy tyggatatta byggatatta agactyttatt acaacactta 77 gaggaccaca ggcaaatcct aagagagaac aactytctac aaactttatt acaacactta	2100
78 aaatotoata gittgacaat agicagtaat goatgiggaa ottigiggaa tototoagoa	2160
78 aaateteata gittyacaat agteageada gacatyayaya cagttagcat geteaagaac 79 agaaateeta aagaccagga agcattatgg gacatggggg cagttagcat geteaagaac	2220
80 ctcattcatt caaagcacaa aatgattgct atgggaagtg ctgcagcttt aaggaatctc	2280
81 atggcaaata ggcctgcgaa gtacaaggat gccaatatta tgtctcctgg ctcaagcttg	2340
81 atggcadata ggcctgegda graddaggar gradaagcag aattagatgc tcagcactta 82 ccatctcttc atgttaggaa acaaaaagcc ctagaagcag aattagatgc tcagcactta	2400
83 tcagaaactt ttgacaatat agacaattta agtcccaagg catctcatcg tagtaagcag	2460
83 tragadacti tryacaatat agacatatta gyttittgaca ccaatrgaca tgatgataat 84 agacacaago aaagtotota tggtgattat gyttittgaca ccaatrgaca tgatgataat	2520
84 agacacaage adagteteta tygegateta gettetett caccatattt gaatactaca 85 aggteagaca attttaatae tygeaacatg actgteettt caccatattt gaatactaca	2580
oc	2640
or was the a paragraph of constitut CtaddCadCt accade accade accade	2700
87 agaagtitgg agagagaacg eggattegga attstcacca ctgcagccca gattgccaaa 88 ccaggaactt cttcaaagcg aggtttgcag attstcacca caggagagttc taggtctacc	2760
no -ttt	2820
on actionating attempting analyging all all galage and all galage	2880
01	2940
92 cettatgeca aattagaata caagagatet teaaatgata gtttaaatag tgteagtagt	3000
00	3060
04 waters aget that age that a	3120
OF patagonata atatagataa taataataa daactagata daccaataaa cededagoot	3180
AC +set-ttong atgaggagtt gaactctgga aggcadagtc cttcacayaa tgadagatgg	3240
07 managaga angagataat agaagatgaa ataaaacaaa qiqaycaaay acaaccaagg	3300
on anterpreta granttator totttatart dagagracid alyaladaca coccadyers	3360
on a second the day caree and a fatatat telected and energy agreed and a fatatat telected and telected agree and a fatatat telected and telected agree and a fatatat telected agree and a fatatat telected agree and a fatatat telected agree agree agree and a fatatat telected agree agr	3420
100 his managed at aggretage the taateat adalted addaly add elegated	3480
101 Liberton at grant at ga agat gat aar ag CCTaCCadil didylyaacy claced yaa	3540
100 ot gaagagagagagagagagagagagagagagagagagag	3600
100	3660
104 Language agreentite affectedade deliced decadaged education	3720
105	3780
106 cagetecate caagetetge acagagtaga agtggteage etcaaaagge tgecaettge	2100
-	

DATE: 01/09/2003 PATENT APPLICATION: US/09/442,489C TIME: 11:43:40

Input Set : A:\SN 09-442,489 amended sequence listing without

markings.txt

					++	3840
107 aaagtttctt	: ctattaacca	agaaacaata	cagacttatt	gtgtagaaga	actocaata	3900
100 + ~++++	antataatta	attatcatct	ttatcatcag	ctgaagatga	aatayyatyt	3960
100+	Cacaddaadc	agattctgct	aataccctqc	aaatagcaga	aataaaayya	4020
110++	ctadatcadc	tgaagateet	gtgagcgaag	ttccagcagi	gicacageae	4020
111 act 202200	a a t c c a c c a c	actocagoot	tctagtttat	cttcagaatc	agccayycac	4140
110 pagget att	· sattteette	aggagggaaa	tctccctcca	adaytyytyc	Leagacacce	4200
112 anaget cca	r ctgaacacta	tattcaggag	accccactca	tgttlagcag	atgractice	4200
114 ~+ ~ ~ ~ + + ~ ~	· ttastaattt	taaaaatcat	tcgattgcca	gctccgttca	gagigaacca	
11E + ~ ~ ~ ~ + ~ ~ ~	taataaataa	cattataaqc	cccagtgatc	ttccagalag	CCCLygacaa	4320
116 accatacca	caagcagaag	taaaacacct	ccaccacctc	ctcaaacagc	ccaaaccaag	4380
117 casassata	r ctaaaaataa	agcacctact	gctgaaaaga	gagagagugg	acctaaycaa	4440
110 gatagagta	atactacaat	tcagagggtc	caggttcttc	cagatgctga	tactitatia	4500
110 ~~++++	o caraaartac	tccagatgga	ttttcttatt	catccagcci	gagigetety	4560
100 agastagat	~ acceatttat	acadaaadat	gtggaattaa	gaataatgcc	LCCagttcag	4620
101 ~~~~+ ~~	a atronoaatra	aacagaatca	gagcagccta	aagaatcaaa	Lyaaaaccaa	4680
100 σэдэээдэд	r cagaaaaaac	tattgattct	gaaaaggacc	tattagatga	Licagargae	4740
100 ~~+~~+	a sastactada	agaatgtatt	atttctqcca	tgccaacaaa	gicalcacgi	4800
124 222000222	a addeadecca	gactgcttca	aaattacctc	cacctgtggc	aayyaaacca	4860
125 patanacta	c ctatatacaa	acttctacca	tcacaaaaca	ggttgcaacc	Ccaaaaycac	4920
126 ~++2~+++	caccadada	tgatatgcca	caaatatatt	gtgttgaagg	gacacctata	4980
107 pact+++aa	a cadetacate	totaagtgat	ctaacaatcq	aatcccctcc	aaacyaycca	5040
100 gatactaga	a saggagttag	aggaggagca	cagtcaggtg	aattigaaaa	acyayacacc	5100
100 -+++	a sourceuseu	tacadatdad	actcaaddad	gaadaacctc	acceguace	5160
120 atacatasa	t tagatgagaa	taaagcagag	gaaggtgata	ttcllgcaga	alycallage	5220
121 + a+ aa+ a+	c ccasadddaa	- aagtcacaag	cctttccqtq	Lydadadayar	aatggaccag	5280
122 atacaacaa	a catctacate	: atcttctaca	cccaacaaaa	atcagilaga	Lygiaayaaa	5340
133 aagaaacca	a cttcaccant	aaaacctata	ccacaaaata	ctgaatatag	<u>g</u> acacgtgta	5400
134 agaaaaaat	a cacactcaa	aaataattta	aatgctgaga	gagttttctc	agacaacaaa	5460
125 ~~++~~~~	a aacacaattt	· daaaaataat	tccaaqqact	tcaatgataa	guildidaat	5520
136 aatgaagat	a dacagadeed	, aagttttgct	tttgattcac	ctcatcatta	cacgcctatt	5580
127 ~~~~~	c cttactattt	· ttcacgaaat	gattetttga	i gttololaga	Lillyalyal	5640
137 gaaggaact 138 gatgatgtt	a accetteccae	r ggaaaaggct	gaattaagaa	aggcaaaaga	aaataaggaa	5700
139 tcagaggct	a acceptacea	, ccacacagae	ctaacctcca	accaacaato	: agctaataag	5760
140 acacaagct	a adultaceag	, ccccatagas	cgaggtcagg	ctaaacccat	acttcagaaa	5820
140 acacaaget 141 caatccact	t ttgcaaagca	atccaaagac	ataccagaca	gaggggagc	: aactgatgaa	5880
141 caatecace	n atttactat	traaaatact	ccagtttgct	tttctcataa	ttcctctctg	5940
142 aagttacac	a attricutation	ccaadaaaac	aacaataaa0	aaaatqaacc	: tatcaaagag	6000
143 agticició	a gradactica	addadaadaa	antaaaccto	aagcatcago	ctatgctcct	6060
144 actgageco 145 aaatcatti	e etgacicace	tacccaatt	t dtttctcaa	gaaacagtto	tctcagttct	6120
145 aaatcatti 146 cttagtati	.c acyclyaay	taccccage	r candaatota	a taageteege	aatgccaaaa	6180
146 cttagtati 147 aagaaaaa	ig acticigaay	- caaccegeeg	aatgaaaaa	atagtcccac	aaatatgggt	6240
14/ aagaaaaaa 148 ggcatatta	JC CttCaayaci	- caayyytyat	ttgaaagata	tacagagaco	agattcagaa	6300
148 ggcatatta 149 catggtcta	ig grgaagard	a nannatttt	. cegaaagaea	r ctattcagga	aggtgcaaat	6360
149 catggtcta 150 tccatagta	at cooctgatto	. ayaaaattii	. gattaggada	gtttatctac	acaagetteg	6420
150 tccatagta 151 tctgattca	aa gtagtttac	t ttaagetge	tcaddaatci	t ctctaggate	accatttcat	6480
151 totgatto	ag attccatcc	. cloudlydae	· ccayyaacc	a aaddcccac	aattctaaaa	6540
152 cttacacc	g atcaagaag	a addaCCCCCC	, acaaycaaca	t ctdaaadtaa	aggaatcaaa	6600
153 ccagggga	ga aaagtacat	. ggaaactaaa	aayatayda - aataaaaa	r ttcgatcta	ttcagaaatt	6660
154 ggaggaaa	aa aagtttata.	a aagtttgatt	actygadad	t caatototo	a addcaddaca	6720
154 ggaggaaa 155 tcaggcca	aa tgaaacagc	c ccttcaagea	a addatycct	Caaccccc	2 22222222	

DATE: 01/09/2003 PATENT APPLICATION: US/09/442,489C TIME: 11:43:40

Input Set : A:\SN 09-442,489 amended sequence listing without

markings.txt

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156 atgattcata ttccaggagt tcgaaatagc tcctcaagta caagtcctgt ttctaaaaaa 157 ggcccacccc ttaagactcc agcctccaaa agccctagtg aaggtcaaac agccaccact	6840
158 totoctagag gagocaagoo atotgtgaaa toagaattaa goootgttgo caggoagaca	6900
158 totoctagag gagecaagee atergraaa teagatetaa geeergeege eaggeteaa 159 toccaaatag gtgggtcaag taaagcacct totagateag gatetagaga ttcgacccet	6960
160 tcaagacetg cecageaace attaagtaga ectataeagt eteetggeeg aaacteaatt	7020
160 tcaagacctg cccagcaacc attaagtaga cctatacagt cccacggoog additional 161 tcccctggta gaaatggaat aagtcctcct aacaaattat ctcaacttcc aaggacatca	7080
162 tecectagta etgetteaac taagteetea ggttetggaa aaatgteata tacateteea	7140
162 teccetagta elgelledae ladgleeled ggeleeggda dadegeeded edebeede 163 ggtagacaga tgagecaaca gaacettace aaacaaacag gtttatecaa gaatgecagt	7200
163 ggtagacaga tgagccaaca gaacettace aaacaaacag gettateeda gaacgaas 164 agtatteeaa gaagtgagte tgeeteeaaa ggaetaaate agatgaataa tggtaatgga	7260
164 agtattccaa gaagtgagte tyeeteeaaa yyactaaate agatyaataa tagtaaatet	7320
165 gccaataaaa aggtagaact ttctagaatg tcttcaacta aatcaagtgg aagtgaatct	7380
166 gatagatcag aaagacctgt attagtacgc cagtcaactt tcatcaaaga agctccaagc	7440
167 ccaaccttaa gaagaaaatt ggaggaatct gcttcatttg aatctctttc tccatcatct	7500
168 agaccagett eteccaetag gteccaggea caaactecag ttttaagtee ttecetteet	7560
169 gatatgtctc tatccacaca ttcgtctgtt caggctggtg gatggcgaaa actcccacct	7620
170 aatctcagtc ccactataga gtataatgat ggaagaccag caaagcgcca tgatattgca	7680
171 cggtctcatt ctgaaagtcc ttctagactt ccaatcaata ggtcaggaac ctggaaacgt	7740
172 gagcacagca aacattcatc atccettcct cgagtaagca cttggagaag aactggaagt	7800
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175 ggaacatgga gaaaaataaa agaaaatgaa ttttctccca caaatagtac ttctcagacc	7980
176 gtttcctcag gtgctacaaa tggtgctgaa tcaaagactc taatttatca aatggcacct	8040
177 gctgtttcta aaacagagga tgtttgggtg agaattgagg actgtcccat taacaatcct	
178 agatctggaa gatctcccac aggtaatact cccccggtga ttgacagtgt ttcagaaaag	8100
179 gcaaatccaa acattaaaga ttcaaaagat aatcaggcaa aacaaaatgt gggtaatggc	8160
180 agtgttccca tgcgtaccgt gggtttggaa aatcgcctga cctcctttat tcaggtggat	8220
181 gcccctgacc aaaaaggaac tgagataaaa ccaggacaaa ataatcctgt ccctgtatca	8280
182 gagactaatg aaagteetat agtggaaegt accecattea gttetageag eteaageaaa	8340
183 cacagttcac ctagtgggac tgttgctgcc agagtgactc cttttaatta caacccaagc	8400
184 cctaggaaaa gcagcgcaga tagcacttca gctcggccat ctcagatccc aactccagtg	8460
185 aataacaaca caaagaagcg agattccaaa actgacagca cagaatccag tggaacccaa	8520
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188 ctttaaaaga ctgaaaaatt ttgtaaatag gtttgattct tgttagaggg tttttgttct	8700
189 ggaagccata titgatagta tactitgtot toactggtot tattitggga ggoactotig	8760
190 atggttagga aaaaatagaa agccaagtat gtttgtacag tatgttttac atgtatttaa	8820
191 agtagcatec cateceaaet teettaatta ttgettgtet aaaataatga acaetaeaga	8880
192 taggaaatat gatatattgo tgttatoaat catttotaga ttataaactg actaaactta	8940
193 catcagggga aaattggtat ttatgcaaaa aaaaaatgtt tttgtccttg tgagtccatc	9000
194 taacatcata attaatcatq tqqctqtqaa attcacagta atatggttcc cgatgaacaa	9060
195 gtttacccag cctgctttgc ttactgcatg aatgaaactg atggttcaat ttcagaagta	9120
196 atgattaaca gttatgtggt cacatgatgt gcatagagat agctacagtg taataattta	9180
197 cactattttg tgctccaaac aaaacaaaaa tctgtgtaac tgtaaaacat tgaatgaaac	9240
198 tattttacct gaactagatt ttatctgaaa gtaggtagaa tttttgctat gctgtaattt	9300
199 gttgtatatt ctggtatttg aggtgagatg gctgctcttt attaatgaga catgaattgt	9360
200 gtctcaacag aaactaaatg aacatttcag aataaattat tgctgtatgt aaactgttac	9420
201 tgaaattggt atttgtttga agggtttgtt tcacatttgt attaattaat tgtttaaaat	9480
202 gcctcttta aaagcttata taaattttt cttcagcttc tatgcattaa gagtaaaatt	9540
203 cctcttactg taataaaaac attgaagaag actgttgcca cttaaccatt ccatgcgttg	9600
204 gcactt	9606
204 goacic	

PATENT APPLICATION: US/09/442,489C TIME: 11:43:40

Input Set: A:\SN 09-442,489 amended sequence listing without

DATE: 01/09/2003

markings.txt

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206 <210> SEQ ID NO: 2
207 <211> LENGTH: 2843
208 <212> TYPE: PRT
209 <213> ORGANISM: Homo sapiens
211 <400> SEQUENCE: 2
212 Met Ala Ala Ala Ser Tyr Asp Gln Leu Leu Lys Gln Val Glu Ala Leu
214 Lys Met Glu Asn Ser Asn Leu Arg Gln Glu Leu Glu Asp Asn Ser Asn
                                    25
216 His Leu Thr Lys Leu Glu Thr Glu Ala Ser Asn Met Lys Glu Val Leu
                                40
218 Lys Gln Leu Gln Gly Ser Ile Glu Asp Glu Ala Met Ala Ser Ser Gly
                            55
220 Gln Ile Asp Leu Leu Glu Arg Leu Lys Glu Leu Asn Leu Asp Ser Ser
                                            75
222 Asn Phe Pro Gly Val Lys Leu Arg Ser Lys Met Ser Leu Arg Ser Tyr
224 Gly Ser Arg Glu Gly Ser Val Ser Ser Arg Ser Gly Glu Cys Ser Pro
               100
                                    105
226 Val Pro Met Gly Ser Phe Pro Arg Arg Gly Phe Val Asn Gly Ser Arg
                               120
228 Glu Ser Thr Gly Tyr Leu Glu Glu Leu Glu Lys Glu Arg Ser Leu Leu
                            135
230 Leu Ala Asp Leu Asp Lys Glu Glu Lys Glu Lys Asp Trp Tyr Tyr Ala
                       150
                                            155
232 Gln Leu Gln Asn Leu Thr Lys Arg Ile Asp Ser Leu Pro Leu Thr Glu
                                        170
                   165
234 Asn Phe Ser Leu Gln Thr Asp Leu Thr Arg Arg Gln Leu Glu Tyr Glu
                                    185
                180
236 Ala Arg Gln Ile Arg Val Ala Met Glu Glu Gln Leu Gly Thr Cys Gln
                                200
            195
238 Asp Met Glu Lys Arg Ala Gln Arg Arg Ile Ala Arg Ile Gln Gln Ile
                            215
240 Glu Lys Asp Ile Leu Arg Ile Arg Gln Leu Leu Gln Ser Gln Ala Thr
                        230
                                            235
242 Glu Ala Glu Arg Ser Ser Gln Asn Lys His Glu Thr Gly Ser His Asp
                                        250
                    245
244 Ala Glu Arg Gln Asn Glu Gly Gln Gly Val Gly Glu Ile Asn Met Ala
                                    265
                260
246 Thr Ser Gly Asn Gly Gln Gly Ser Thr Thr Arg Met Asp His Glu Thr
                                280
247
            275
248 Ala Ser Val Leu Ser Ser Ser Ser Thr His Ser Ala Pro Arg Arg Leu
250 Thr Ser His Leu Gly Thr Lys Val Glu Met Val Tyr Ser Leu Leu Ser
                        310
                                            315
252 Met Leu Gly Thr His Asp Lys Asp Asp Met Ser Arg Thr Leu Leu Ala
                                       330
                    325
254 Met Ser Ser Ser Gln Asp Ser Cys Ile Ser Met Arg Gln Ser Gly Cys
                                    345
                340
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RAW SEQUENCE LISTING ERROR SUMMARY PATENT APPLICATION: US/09/442,489C

DATE: 01/09/2003 TIME: 11:43:41

Input Set : A:\SN 09-442,489 amended sequence listing without

markings.txt

Output Set: N:\CRF4\01092003\I442489C.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:3; N Pos. 45,1057,1117,1553,1559,1581,1590,1639,1644,1749,1757,1769 Seq#:3; N Pos. 1948,1961,1962,1987,1991,2162,2183,2201,2204,2241,2242,2461

Seq#:3; N Pos. 2570,2574,2576,3142

Seq#:16; N Pos. 1,2,3,4,5,6,7,8,9,10,11,12,13

Seq#:32; N Pos. 17 Seq#:36; N Pos. 8